



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,547	09/15/2003	Simon Anne de Molina	1316N-001670	2269
27572	7590	03/29/2006		EXAMINER
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			SCHWARTZ, CHRISTOPHER P	
			ART UNIT	PAPER NUMBER
				3683

DATE MAILED: 03/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES PATENT AND TRADEMARK OFFICE

---

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/662,547  
Filing Date: September 15, 2003  
Appellant(s): DE MOLINA, SIMON ANNE

**MAILED**

MAR 29 2006

**GROUP 3600**

---

Michael J. Schmidt  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed January 9, 2006 appealing from the Office action mailed July 6, 2005.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

No amendment after final has been filed.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

4,133,415	Dressell, Jr. et al.	1-1979
4,742,898	Lee	5-1988
6,352,145	DeMolina et al.	3-2002

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeMolina et al. in view of Lee or Dressell, Jr. et al. '415.

Regarding claim 7, as previously explained, DeMolina et al. discloses an absorber with which applicants are well familiar including a pressure tube 14, a piston body 40, a piston rod 18, first and second valve assemblies 58,66, a piston nut 70, a third fluid passage way 80,82,86 and a sleeve 78, all functioning in the claimed manner. DeMolina et al. lacks showing a plurality of holes formed in a helical formation and the sleeve 78 covering all of the plurality of holes to fully close the third flow path. However, as discussed previously, such an idea is old and well known in the art.

Lee or Dressell, Jr. et al. '415 is relied upon to provide a general teaching of this idea. In Lee see orifices at 34 and see column 4 around line 40 where it is stated that the orifices 34 may be arranged in helical patters or others. Note that the arrangement of the orifices need not be specific for the proper functioning of the damper.

Dressell, Jr. et al. '415 shows a helically arranged grooves or channels in figures 2 and 10 that may be progressively covered by a sleeve 76 dependent upon its rotational position. This reference is relied upon to show it is known to use a progressive metering effect of fluid passages to control the responsiveness of a shock absorber.

One having ordinary skill in the art at the time of the invention would have found it obvious to have provided a plurality of holes, as claimed, in the piston nut of DeMolina et al., as taught generally by Lee or Dressell, Jr. et al. '415, and that are progressively covered by the sleeve 78, simply dependent upon the damping characteristics desired from the absorber. It is notoriously well known in the art to provide dampers, as shown by DeMolina, with progressively covered holes as one well known means to further regulate the damping characteristics (i.e. soft, medium and hard rides) of a shock absorber dependent upon the specific handling characteristics desired from a particular vehicle.

Note that as the sleeve 78 of DeMolina travels back and forth during the damping cycle, it could be made capable of covering all of the holes to close the third flow path, as modified. As discussed above, such a modification would be obvious and simply depend upon the damping characteristics desired.

Regarding claims 8-11 as modified above, these requirements are met.

3. Claims 12-15, 18 rejected under 35 U.S.C. 103(a) as being unpatentable over DeMolina in view of Dressell et al. '415 or Schupner '122 ..

Regarding claims 12-15 and 18 DeMolina lacks a showing of the third passageway comprised of a single hole and groove with a depth of the groove decreasing from the hole to a terminal end and the sleeve simultaneously covering the hole and the groove to fully close the third flow path, as now amended.

The references to Dressell et al. '415 or Schupner '122 provide a general teaching showing helical grooves with varying depth with holes which open into them. Please see in particular figure 10 of Dressell

One having ordinary skill in the art at the time of the invention would have found it obvious to have provided the device of DeMolina with a single hole-groove combination, with the groove having a varying depth, as claimed, and as taught by either Dressell et al. or Schupner, simply dependent upon the type and level of damping characteristics desired from the shock absorber. Note that other arrangements of the grooves are possible, as stated in the references.

Note that as the sleeve 78 of DeMolina travels back and forth during the damping cycle, it could be made to be capable of covering the hole and groove to close the third flow path, as modified. As discussed above, such a modification would be obvious and would simply depend upon the damping characteristics desired.

Regarding claims 13-15,18 these requirements are met.

#### **(10) Response to Argument**

As explained previously the examiner maintains the position that one of ordinary skill in the art would have found it obvious to have modified the device of Demolina et al., as taught by the references to Dressell, Lee and Shupner above since it is

notoriously well known in the art to control the level of damping through progressively opened or metered passageways or channels. The reference to De Molina (contrary to applicant's statements at page 11 third full paragraph of the Brief) shows all of the claimed features with the exception of the plurality of holes. De Molina does show a progressively controlled orifice at 86,88 to control the level of damping. As stated in column 4 of De Molina beginning on line 17... "*During the larger amplitudes of extension, sliding sleeve 78 will move enough to cover a portion of bore 86 and possibly a portion of tapered slot 88 due to the friction with pressure tube 14 and will begin progressively closing fluid passage 74. As shown in figures 3 and 7, tapered slot 88 of metering slot 76 permits a gradual or progressive closing of fluid passage 74 which provides the advantage of the major reduction or elimination of the switching noise typical with a dual stage damping device.*"

The reference to Dressel, Jr. et al. is relied upon to show another shock absorber where the damping characteristics may be tailored by progressively covering a plurality of orifices (although the adjustment is manual). Dressell discloses in col. 2 lines 56+ (with respect to the metering sleeve 76) "*This metering sleeve is locked in place with respect to the outer tube and the interlocked pressure cylinder and bearing retainer may be rotated to control the point on each groove that overlies its corresponding circular port in the cylinder. This controls the metering orifices configuration and accordingly the resistance provided to movement of the cylinder*". In col. 5 lines 56+... "*More than three ports may be employed in alternative embodiments and generally the spacings are arranged at exponentially decreasing distances in the*

*direction of the rear of the cylinder.”* In col. 7 lines 13+ “*The ports are successively closed off as the piston moves down the cylinder..*” In col. 7 lines 52+ “*Alternatively the ports need not be in line but could be displaced radially with respect to one another, so as to align with the spiral groove, or the ports could have different sizes, but be non-exponentially spaced, to achieve the same dynamic damping effect*”. In column 7 lines 64+ “*As the cylinder is rotated relative to the sleeves the grooves will effectively be shifted longitudinally, relative to the ports, decreasing the effective ports are completely shut-off*”.

The examiner draws two easy conclusions from Dressell. First, that the number and/or spacial arrangement of the ports may be altered to achieve a similar damping effect or tailored to a desired damping effect (see col. 7 lines 45+). Second, that the ports are in fact metered. Applicant’s claimed invention is simply an obvious alternative arrangement to the invention of DeMolina as modified by the teachings of Dressell. Applicant’s are also directed to the discussion in Lee (previously cited) col. 4 lines 39-40.

The reference to Schupner is relied upon for similar teachings to that of Dressell. These references, due to their similar subject matter and intent to solve the same problem as applicants, are clearly combinable from the viewpoint of the ordinary skilled worker in the art at the time of the invention.

In response to applicant’s argument that the examiner’s conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon

hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA).

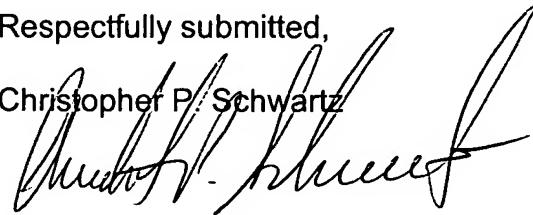
**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Christopher P. Schwartz



CHRISTOPHER P. SCHWARTZ  
PRIMARY EXAMINER

Conferees:

Cps CPS

Jm JM

Mb MB